DOCUMENT RESUME

ED 439 252 CE 079 873

AUTHOR Williams, John W.
TITLE The Chat Room as an Integral Part of the Virtual Classroom in Distance Learning Program Design for Adult Learners.
PUB DATE 1999-12-01
NOTE 29p.
PUB TYPE Reports - Research (143) -- Tests/Questionnaires (160)
EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Adult Education; Computer Uses in Education; Continuing Education; Distance Education; *Educational Technology; Higher Education; *Internet; Listservs; *Online Systems; *Teaching Methods; *Technological Advancement
IDENTIFIERS *Chat Rooms

ABSTRACT

The chat room is currently the most likely candidate to replace the interactivity of the traditional classroom. A study explored the experiences and opinions of adult learners and their instructors on how well the chat room substituted for the traditional classroom, their comfort level with the technology, and whether or not it enhanced the learning environment. Purposeful sampling of students and instructors who experienced using the chat room as a virtual classroom was employed. The qualitative study used semi-structured interviews with 3 females and 10 males who participated in courses using this mode of interactivity. The interviews were transcribed and verbatim transcripts were produced. The following eight major issues surfaced: (1) the nature of the chat room; (2) communication problems; (3) appropriate subjects; (4) advantages; (5) disadvantages; (6) mature learning skills; (7) design; and (8) the chat room's future. Comparing these findings to a current theory of adult learning principles, the interviewees indicated that the chat room has potential as an effective educational tool for adult learners as an alternative, supplement, or addition to traditional classrooms. A sample interview questionnaire is appended. (KC)

Reproductions supplied by EDRS are the best that can be made
from the original document.

CE

ED 439 252

The Chat Room as an Integral Part of the Virtual Classroom in Distance Learning Program Design for Adult Learners

John W. Williams

University of Missouri, Columbia, MO

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

J. W. Williams

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

December 1, 1999

BEST COPY AVAILABLE

CE079873

Abstract

In order for distance learning program designers to best utilize new interactive technologies, they need to study the effectiveness of these tools, understand adult learners' reaction to them and the impact this technology will have on adult education, from the perspective of both the student and the instructor. The chat room is currently the most likely candidate to replace the interactivity of the traditional classroom. This study explores the experiences and opinions of adult learners and their instructors on how well the chat room substituted for the traditional classroom, their comfort level with the technology and whether or not it enhanced the learning environment. Purposeful sampling of students and instructors who experienced using the chat room as a virtual classroom was employed. This qualitative study used semi-structured interviews with 3 females and 10 males that participated in courses using this mode of interactivity. The interviews were transcribed and verbatim transcripts were produced. Eight major issues surfaced: the nature of the chat room, communication problems, appropriate subjects, advantages, disadvantages, design, and the chat room's future. Comparing these findings to a current theory of adult learning principles the interviewees indicated the chat room has potential as an effective educational tool for adult learners as an alternative, supplement or addition to traditional classrooms. A sample interview questionnaire is provided as Appendix A.

The Chat Room as an Integral Part of the Virtual Classroom in Distance Learning Design for Adult Learners

Using the Internet as a part of an adult distance learning program is still in its pioneering stage. Several Internet tools, such as e-mail, bulletin boards and chat rooms, are used by instructors as interactive devices to enhance or replace classroom interactivity. In order for distance learning program designers to best utilize these new technologies to help adult learners, studies need to be conducted to evaluate the effectiveness of these tools and to help designers understand the adult learners' reaction to these new interactive methodologies. The welfare of the adult student should be a major concern for the distance learning program designer. To better understand the impact of this technology on the overall system of adult education, studies should include the perspectives of both the student and the instructor.

The purpose of this paper is to study the effectiveness of the chat room, the most likely candidate to replace the interactivity of the standard classroom. The other types of Internet tools available to distance learning developers, such as e-mail and electronic bulletin boards, are more formal, instructor directed, and based on a prepared response over a period of time. The chat room provides an immediate response capability and allows students to interface with both the instructor and fellow classmates. It is more informal and less structured than other Internet teaching tools and most chat rooms provide a separate "room" for sidebar discussions.

This study will look at the previous experiences of adult learners and instructors using the chat room as an interactive tool. It will explore their opinions of how well the chat room substituted for the traditional classroom, their comfort level with the technology, if it enhanced the overall learning environment, alternative uses for the chat room, and better ways to use the chat room within an adult education environment. This paper is not meant to be a

comprehensive study to supply the reader with absolute solutions to distance learning or adult education problems, but rather a view of current practices from recent participants.

Procedures

Sample

The data were obtained using purposeful sampling. As Merriam (1998) explained, "Purposeful sampling is based on the assumption that the investigator wants to discover, understand, and gain insight and therefore must select a sample from which the most can be learned" (p. 61). Patton (1990) clarified that "the logic and power of purposeful sampling lies in selecting *information-rich cases* for study in depth. Information rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the research, thus the term *purposeful* sampling" (p.169, emphasis in original).

The sample consisted of instructors and graduate students from a local southeastern college who taught or completed courses using the chat room for at least a portion of the coursework. The instructors taught or are currently teaching courses using the Internet as part of their instructional method. Most of the students were working on a Master's of Education degree program and many were educators in secondary education, at the college level, or adult continuing professional (military) education. The student group interviewed in this purposeful sample had insight not only from the perspective of actually using fairly new distance learning technology, but also from the perspective of an adult learner familiar with the various paradigms of education. The sample consisted of two chat room instructors and eleven graduate students. As is common among adult education courses, the students came from a variety of backgrounds and occupations, including a police officer, several mid-level and high school teachers, college instructors, soldiers, retired military, government contractors and civil service employees. Their

ages ranged from 28 to 60 years of age. Many were part of a program of study in Educational Technology and were involved in design and development of distance learning using the chat room and other Internet instructional tools. Of the thirteen subjects interviewed, three were women and 10 were men. Criteria for selection included interviewees' experience in using the chat room in courses taken or taught, and the subjects' availability to be interviewed locally.

The subjects' experience in using the chat room varied from first time use to those who were well versed and practiced in using commercial on-line chat rooms. After the class ended, some continued to use chat rooms while others did not. The students stated they had taken the courses from as recently as four months ago to as much as 18 months ago.

Research Method

This study was conducted using qualitative research. This was the best approach because using the chat room as a part of distance education is a fairly new teaching tool. As Merriam (1998) indicated in her book on qualitative research, the researcher, as was the case in this study, is unsure of where the analysis of the data will lead.

> A qualitative design is emergent. The researcher usually does not know ahead of time every person who might be interviewed, all the questions that might be asked, or where to look next unless data are analyzed as they are being collected. Hunches, working hypotheses, and educated guesses direct the investigator's attention to certain data and then to refining or verifying hunches. The process of data collection and analysis is recursive and dynamic. But this is not to say that the analysis is finished when all the data have been collected. Quite the opposite. Analysis becomes more intensive as the study progresses, and once all the data are in. (p. 155)

Method of Data Collection

Personal interviews were conducted using an audio recorder with permission from the interviewees. As Merriam (1998) discussed in her chapter on Conducting Effective Interviews, "Interviewing is necessary when we cannot observe behavior, feelings, or how people interpret the world around them. It is also necessary to interview when we are interested in past events that are impossible to replicate" (p. 72). And "Interviewing is also the best technique to use when conducting intensive case studies of a few selected individuals" (p. 72). The subjects of this study were limited in number by the newness of the technology and the amount of time since the introduction of the chat room into the college's instructional methodology. For some students this was their first experience using a chat room, for others it was the first time they had used the chat room as an educational tool. For all the students, their initial experience using the chat room in a distance learning environment cannot be replicated. All information was held in the strictest confidence and the interviewees were assured of anonymity in the final paper.

This study used a semi-structured interview as described/defined by Merriam (1998, pp. 73-75). There was an initial set of open-ended questions given to the interviewee prior to the interview that was also used as a guide by the interviewer (see Appendix A). "This format allows the researcher to respond to the situation at hand, to the emerging worldview of the respondent, and to new ideas on the topic" (Merriam, 1998, p. 74). The interview questions changed as the interviews progressed based on the types of information gathered by the interviewer. As suggested by Merriam (1998, pp. 75-76), a pilot interview was conducted to test the wording of the questions and the responses of the interviewee.

Data Analysis

Data analysis was inductive. It began with a review of all the transcripts derived from the recorded interviews. Responses were compared and categorized based on their positive or negative reaction to the question, their clarity of meaning and similarity to other participants' responses.

Related Literature

There is very little literature directly related to the specific topic of using the chat room as a virtual classroom. Although there are many studies concerning commercial chat rooms and several studies concerning various Internet programs that are on-line as educational tools, few focus on using the chat room as a virtual classroom. This paper has few predecessors and can be viewed as a pilot study that isolates and evaluates the chat room as an educational tool for adult learners.

The purpose for using any new educational tool should be to enhance the learning environment of the student. Knowles (1980), outlined four basic characteristics of educative environments for all types of organizations attempting to help people learn: "(1) respect for personality; (2) participation in decision making; (3) freedom of expression and availability of information; and (4) mutuality of responsibility in defining goals, planning and conducting activities, and evaluating" (p. 67). Can Internet interactive tools be used to establish and reinforce this type of learning environment for adult learners in distance learning programs?

The self-directed form of learning is desirable among adults and can be a part of either traditional or non-traditional educational programs. Merriam and Caffarella (1991), in their discussion of self-directed learning indicated that "Learning outside the confines of formal education and training programs, learning on one's own, is the way most adults go about

acquiring new ideas, skills, and attitudes." and later "… we contend this form of study can take place both inside and outside of institutionally based learning programs. For the most part, however, being self-directed in one's learning is a natural part of adult life" (p. 41). Colleges and universities that are designing and developing distance learning programs from courses traditionally taught in the classroom environment are bridging the gap in order to facilitate the adult student's desire for a self-directed style of learning.

This study was similar in nature to a study conducted by Powers and Mitchell (1997) which focused on the use of Internet communication devices used in a single graduate class. The Powers and Mitchell study was also qualitative in nature, but data were collected using e-mail records, chat room transcripts and group interviews. The findings from the Powers and Mitchell study revealed, "A definitive community of learners emerged despite the distance of the learners and the lack of face-to-face contact"(p. 2). Analysis from this study revealed four major themes related to student perceptions and performance: student peer support, student-to-student interaction, faculty-to-student interaction, and time demands of the course. However, some students indicated disappointment when the chat room shifted from dialogues between classmates and was redirected to the discussion topic of the class period. This desire to get to know one's peers is a bonding aspect of most traditional classrooms. Often hallway discussions and after class meetings develop the rapport and support many adults are used to in the work environment.

Internet tools may be an appropriate interactive device for adult learners, especially in higher education programs such as graduate work. Hettinger (1995) indicated that there was an increase in the cognitive level of students as they progressed through a course using an e-mail system called Computer Mediated Communication (CMC). "At the onset CMC discussions

were more likely to fall in the lower levels of cognitive activity scale not applicable, designing, imagining and synthesizing, while later messages were in the connecting, analyzing and evaluating categories," and "conceptual movement for students involved in a topic was also evidenced by the quality of the communication change from lower to higher cognitive levels" (p. 193). Although this study only involved e-mail, a mix of Internet devices would probably garner the same response.

Results

As might be expected from any group of adult learners from varied backgrounds and experiences, the chat room received mixed reviews on many of the questions asked and the issues raised. From the questions asked, eight major issues or items of importance surfaced: (1) the nature of the chat room, (2) chat room communication problems, (3) mature learning skills, (4) subjects appropriate for the chat room, (5) advantages, (6) disadvantages, (7) design, and (8) the future of the chat room as a virtual classroom. The following are some of the most interesting and enlightening perspectives on the main issues that were raised during the interviews.

The nature of the chat room as a virtual classroom

The nature of the chat room as a virtual classroom as described below is an attempt to imitate the real experience, however, a student's ability to perform well in a traditional classroom may not equal his or her ability in a virtual realm. The virtual classroom (chat room) places obstacles in the path of a students' learning by eliminating the physical and visual cues they could normally rely on in a traditional classroom setting. Since distance learning programs are more self-directed in nature, the student cannot rely on the structured or semi-structured environment of the traditional college course system. The following four discussions taken from the interviews best describe this group's overall opinion of the issue; that the chat room or

any other virtual classroom cannot replace the traditional classroom but mature learners can adapt if necessary.

> From a learning perspective, chat can never replace a regular classroom. From that standpoint everybody is inhibited when you move to a chat, or virtual environment. The best learning environment that you can hope for is one-on-one instruction with the instructor. And as you move away from that one-on-one direct instruction, then there become more and more obstacles to your learning. So when you get to a large classroom setting that individualized attention begins to fade. And then if you put that into a virtual environment, now the instructor no longer has all of those physical and visual cues to pick up on when students may not be getting a topic. It relies completely on them jumping in and indicating verbally, or in writing, to him in the chat room that there is a problem or issue. And if it is never surfaced that student and his learning has missed the point.
>
> ... So you begin to detract any time you step away from one-on-one instruction. And the further you move away from it the more problems. Now that doesn't mean that learning can't take place, it just means that you are going to have to be more dedicated to that learning, both as an instructor and as a student. You are going to have to try harder to get the learning in those environments than you might in another.
>
> It doesn't matter how a student learns. There is no sacrosanct way of learning. We all learn in different ways. ... The difference in virtual classroom is ... In order for a student to succeed he or she must be very much more self-directed than what I think the normal college student is today, especially young college students. I think young college students coming out of the structured public school system probably benefit from a structured or semi-structured college course system. Some don't need it though. Some have already taken charge of their learning and they are not only going to learn what you want to teach them, they are even going to learn in spite what an instructor does or doesn't do in the classroom.
>
> I think there is a quality of in-class instruction that will never quite be duplicated by a virtual experience. In fact, a virtual experience is an attempt to imitate the real, so you are always trying to imitate the real experience. So there is certainly a quality of teaching and learning that takes place in a real classroom that would, that I think will never be replaced. I think the mix of in-class learning and virtual learning is very much dependent on two things; your ability to get to the real class and your ability to do well in a virtual classroom setting. And the answer is probably going to be a mix. If you simply have... do not have the time or you are not close enough to a place to get to class, you may well do all of your work in the virtual classroom. And, that may not be your preference, but quite frankly, night classes and weekend classes aren't the preference of students, and sometimes they have to do that anyway.

So, in order to be successful in the chat room as a virtual classroom, students must be able to overcome the perceived "unreality" of the experience, function without the aid of physical and visual cues and be self-directed in their course of study.

Chat room communication problems

Many of the students had problems adjusting to the virtual environment. These problems stemmed from poor typing skills, computer hardware and software problems and the lack of knowledge and skills necessary to communicate using the chat room. To communicate the chat room software requires learners to type in a phrase or sentence and then send it to a central holding area on the main server. The message appears on the screen of all the chat room participants determined by the order in which the main server receives the messages. This process is not necessarily a logical progression. Some students never overcome the lag time problem, but others adjusted to it as just another form of communication. The following eight excerpts from interviews express the divergence of feelings related to this problem.

> It's not like a normal conversation, where a normal conversation keeps a strand. Everyone in a chat… because chat room conversation shows up as type, you can't differentiate, everyone is as loud as everyone else. And those people who can type faster, or can type in shorter messages or sentences or phrases and send it, and have faster computers, will get to talk more.

> Unlike the traditional classroom, where you can look around and see who is raising their hands to interject an idea, and the instructor can call on them individually, in chat they can be all formulating ideas and all dropping them at the same time into the box. So you may have 2, 3 or 4 ideas all pop up on the screen virtually simultaneously and not all of them will necessarily be in a logical flow or pertinent to the subject at hand.

> You may be discussing one topic, and it may spur somebody to think of something else they want to ask about or delve into discussion on, and they may interject that thought and lead the group off on to that topic. While at the same time other folks are answering or responding to the original question or original topic, and those responses drop in after the group has headed off in another direction, due to the delays involved in chat.

> I think the main problem is though, I honestly believe that some people have problems keeping track of more than one thought at a time, or one train of thought. And I mentioned earlier, I have trouble with that sometimes. It is really a drain to keep track of different things that are going on, and sometimes I lose track. I think some people just really have a mental block about even trying to do it and they get discouraged.
>
> My feeling though was, I wasn't really there. You know, if I wanted to get up and leave the room, I could do that. You know, who is keeping track of where I am. You know, I'm supposed to be on my computer, but if I don't respond for a while, you know, who's to know? I even got to a situation once where I felt like I was behind so much, I would even type in a phrase that I thought would sound intelligent, and then at the appropriate time I would go send, or enter and put that phrase in there. … I played around with that so I could at least be responsive with my input, and still sound like I was up to speed with what was going on. I was frustrated.
>
> When you are in a live setting, say for example, if someone is discussing something and someone has what they would determine an epiphany, and they would say "I've got something to add to that." You know how instantaneously they deliver something that is of use. Well, when you are doing that… in the chat room, it gets crazy. …you can't reap the benefits from that. Because number one, it may come, but once you type it in, it may come up four or five sentences or thoughts later and by then you are going "Huuhh?"
>
> So once I learned that there was a delay time between when you actually type it in and send it, and the time you will see it on the screen, then everything began to flow pretty good. It only took about, probably about 15 or 20 minutes to learn how to solve that problem.
>
> But the real issue is, anyone who is comfortable at a computer will become comfortable in a chat room, if not the first time, then certainly by the third, forth, fifth, sixth.

The problems of communication in the chat room include; the lack of continuity of the dialogue, frequent lack of a logical flow of information presented, lack of spontaneity in expression, difference in speed of contributions due to different speeds students can type, formulate ideas and express them, contributing to the potential for some to dominate discussion. Apparently some students can readily adjust to this form of communication while others cannot.

Mature learning skills

Why, if there are so many problems inherent with the chat room, would a person responsible for developing and designing adult learning programs consider including the chat

room as a part of their instructional method? The majority of interviewees thought that using the chat room as a virtual classroom would be most effective for the adult level of education when compared to other levels. Only a few considered it applicable to all levels of education. As described by the two following excerpts, this may not be a question of age as much as one of mature learning skills.

> I think that chat could be used effectively in all those arenas. I think you will find increasing success with the level of the learners. For instance, I think you will have better success at the graduate level than at the undergraduate and better at the undergraduate than at the high school.... It has to do with probably the motivation of the learner because chat places a lot of the burden of the learning on the individual themselves and as you move up progressively in that ladder you are seeing a higher and higher commitment to the learning process. High school students are a captive audience, at least in theory undergraduates are there because they sort of want to be and graduate students are, you usually don't go beyond the bachelor's unless you want the education.
>
> Graduate students are just different because most of them have worked. They are more professional, they come into a graduate program they have certain goals in mind. They don't act silly most of the time, sometimes. And they are used to discussing things in class. I think at the undergraduate level, you have bigger classes, it makes it harder for students to participate, and some don't know how to participate. But I think it can be done at the undergraduate level and in some cases it would be a good use of it, a good technology and a good strategy to get students to be engaged in a discussion.

The characteristic of many adult learners, possessing mature learning skills such as commitment to the learning process, established goals, desire for a participative form of interaction and self-motivation, may make the chat room a useable enough tool to overcome its limitations.

Subjects appropriate for the chat room

When answering questions about applicable subjects for the chat room, the interviewees not only described the limitations of the chat room but also the limited purposes of the chat room; communal exchange, sharing ideas and discussion. The following four excerpts summarize the group's feelings.

> I think some subject matter requires attendance, by the sheer fact that you want to make sure that they can demonstrate and perform. And when you have total distance learning you never really know if that student is demonstrating and performing.
>
> If you are trying get across knowledge level objectives, let's say lots of facts and figures, and examples and concepts, that's not the way to do it. I think the chat is better for discussing problems and thinking through problems and getting some kind of communal exchange, you know getting people to share their ideas about a problem. So some higher level types of things. Things that involve a discussion would be better served there. You know, you really can't do a lecture. Instructors that try to do lecture find real quickly they can't do it. It is too much typing first of all, but then you lose students.
>
> I mean obviously, psychomotor skills. I mean, you can talk about those types of things, but really until you see them and do them, you aren't going to make a lot of progress I don't think. Again, I think problem oriented types of tasks or objectives are well served with the chat. But as far as individual classes, I think...I'm not sure how you do a math class other than answering questions. The chats I've used, it would be hard to present…write a problem on the board and show you how you would solve it, although some of the newer ones have that chalkboard or blackboard function.
>
> Any subject area where discussion …real time discussion is useful, you can use the virtual classroom. Because that's what it brings, real-time discussion.
>
> I can't think of any other real-time tools out there that allow you to communicate over the Internet, … Some kind of spontaneous conversation can occur. There is no delay, but it is a synchronous activity. So in that regard anything where there would be a benefit for having everyone, being together at the same time, chatting and building on that… immediate responses, feedback, immediate feedback.

Subjects requiring demonstration and performance, psychomotor skills, a lot of facts and figures, a lot of examples and concepts, and those in a lecture format would be better served in the traditional classroom. Subjects which include the need for real-time discussion, dialogue with no delay, synchronous activity and immediate response and feedback could use the chat room as an appropriate method of instruction.

Advantages

The advantages highlighted by the interviewees were broken down into four major categories; logistics, convenience, anonymity and record keeping. Although the following five

quotations do not address all the expressed advantages, they describe the advantages and situations of those participating in the virtual classroom (chat room) in detail.

> We had some people from as far away as (city 100 miles away) were using it. It saved them the drive to and from. … It's good you can do things that way so you don't have to be there all the time. Additionally, the hours are conducive. We had certain days of the week, you can pick your own time to get on it during those time frames.

> More so in the logistical sense, you can sit there in your pajamas if you are tired. Come home from work and sit there in your pajamas and still do your class. Versus having to kind of clean up, go get in your vehicle, ride a half-hour, you know, attend class. You know you may even have time to jump up and go to the kitchen and get a soda and come back and be able to catch up on the conversation and not be lost. Whereas in the classroom, when you have to wait on, usually the quiet thing is to wait on breaks. And you really don't have to do that in a chat session. If you are sharp enough to be able to keep up.

> … actually I did sit down at the computer and would have a beer. I did mention that on-line. Which the first night we were doing it I said "I set down, I'm with a Coors light, I said, this is great being able to take a beer to class." One guy, I can't remember his name, said "But don't tell me that, I'm still at work." So, anyway, we had a little bit of light-hearted stuff there. But, the positive thing is you can sit down and keep up with that, but you are at home, being at your house is a nice environment to be able to do that from. And keep up with it. That's probably one of the big advantages.

> I feel that some students who don't respond in the classroom felt very comfortable in that environment. Because some people don't like to get up and speak in front of a classroom, but they have the anonymity of the computer so they were able to go ahead and use that effectively.

> … you know how people go into schools with recorders. … Well you really don't need to do that because you can pull up a transcript from a chat room. So if you miss something or somebody had a question, or you had to go to the restroom or something like that, you can always pull it up and go back and look at it. If the instructor said something important, you've got written documentation.

The advantages of the virtual classroom (chat room) for the adult learners included their ability to choose the physical environment in which they wished to have class, the lack of logistical necessities involved in traditional classroom settings, conducive class meeting times, and the ability to have a written record of classroom events.

Disadvantages

The disadvantages of the chat room described by the interviewees were interlaced with the problems of conversation lag time and computer software and hardware failures already mentioned. The major disadvantages concerned the lack of person-to-person interface, the limited mode of communication (text based), feelings of artificiality, and the lack of flexibility in learning styles associated with the chat room. The following nine excerpts from the interviews elaborate and expand on these disadvantages.

> It has been proven that interfacing with a computer screen is more tiring to begin with. And if that is all you do, then you physically get more tired than if you are in the traditional classroom. And then you take, putting emotions out of that, you take out just the general face-to-face interaction, which people enjoy, most people enjoy that. It takes its toll.

> It's you are not there. You know, to me it is artificial. It's like talking to somebody on an answering machine.

> Well, yes, I think there are a couple of disadvantages. One is that it is all type based as opposed to spoken. So there is obviously a connection between your comfort with typing versus your comfort with speaking. Secondly, it is dependent, to a large extent, on the speed of your computer. Students with faster modems will speak faster and more often. The third is that because the ... because everyone's conversations are mixed, it takes you a while to get used to following a conversation.

> …there is a learning curve with using a chat room that there would not be in a regular class. We're all trained to speak orally. So you don't have to teach anyone to speak. They may be a little shy, but you don't have to them how to speak. Whereas, if you are not use to keyboarding, then there are some skills you have to learn. And if you are not used to the protocol for how you send messages and how messages are received, you have to get used to that.

> I didn't like it because I'm an auditory learner. I'm a learning specialist so I pretty much know how I learn well. And I'm an auditory learner and I need a lot of visual stimulus.

> I wasn't disadvantaged at all, but some people do not do well in that type of an environment. It's not conducive to their learning. They like a more immediate rapport and they like a personal rapport with an instructor. But I found no disadvantage to it at all.

> Cause you can't put emotions into a chat session. … And a lot of messages are received and sent better by emotion being involved.

> I mean it moves pretty fast. Some people, they need the visual. If they need that response quickly, you can't stress your importance. It's hard to stress the importance on text, seeing the text and reading the text. And there are ways to do it, but you have to be a good chat room person. And be in a chat room with experienced people. Someone that is new, that isn't that experienced, if they are trying to get a point across, but they can't.

Some of the advantages to the student can turn into disadvantages for the instructor. The student's desire to be in a comfortable home environment can turn into an accountability issue for the instructor as can be seen in the following quotation from one of the instructors.

> It's obviously a little more difficult for an instructor to know what the students are doing in the class. You don't know if a student is away from his or her computer or sleeping or has someone else there, doing the chat in their place. You just don't know that because you can't see them.

In one class a situation arose where a number of students failed to fully participate because other students had much more prior experience and advanced knowledge in the subject area being taught. Although this situation might also exist in the traditional classroom, being unable to see the students and interpret their visual feedback would limit the instructor's ability to discover the reason for lack of participation. The following three excerpts are indicative of this disadvantage.

> … being teachers, and me not being a teacher, they carried the subject matter a lot better that I did, ... in the class. They dominated the chat room to begin with, and they were talking about things like…when they started talking about things like "title this" or you know, lost us. We were in "Never, Never Land." We didn't know what they were talking about, and we would constantly go back and forth, "Do you have any idea what this is they're talking about?" Because we didn't want to break up the chat room if they had a good conversation rolling in other words. We didn't want to break it up and say, "Wait a minute, we don't have any idea what you are talking about. It's [a foreign language] to us. We're not familiar with what these programs are, and title, entitlements and stuff like that." And it kind of lost us, I mean, because of that.

> We had varying degrees of interest, you had your educators, and you had your Army folks. She was having a hard time trying to talk to educators and trying to talk to the Army folks, folks with Army backgrounds, the other folks, and it really got to be a mess. It seemed like she was having three different conversations with three different groups of

> people. So, that didn't go well at all. I didn't get anything out of that class, nothing at all.
>
> The problem … was too many people with too many backgrounds. She, Professor B, is a squared-away instructor, I have a lot of respect for her, but the problem was that you had too many people coming from various backgrounds. And she would ask a question, and it depends on how you ask the question. I mean, if you are talking to an educator, you are going to set a situation so that it applies to the education side of the house, so that they have some kind of reference points to discuss the point…to discuss the issue. And it was very hard for her to come up with a generalized discussion… generalized topic that was applicable to both educators and everybody else.

The disadvantages of using the chat room as a virtual classroom are primarily due to the artificiality imposed on the student and instructor and the physical mechanics of using the chat room as a communication device. The lack of person-to-person contact and inability to use all the senses were major concerns to many of the students. Although the chat room at its current level of technology will continue to have these problems, the interviewees had several design recommendations to improve these situations.

Design

There was a multitude of recommendations for class design of distance learning courses using the chat room. This is probably due to the fact that many of the interviewees were in education and many were in instructional design and curriculum development courses. These recommendations were either facets of the chat room-based course they liked or what they thought needed to be changed. The following is a list of the overall recommendations that they suggested.

- Pictures and a biography of students to link to the chat room identifier so the chat room participants have an idea of who is speaking and their experience
- Multiple topics in the related field of study from which participants can choose to participate in chat room discussions

- An initial class on how to operate the actual chat room, including chat room protocol, and practice in communicating via the actual chat room
- A situation or scenario based on required readings so students can respond
- Smaller chat rooms (a minimum of 4 and a maximum of 12 students) by separating the class into projects if a course requirement or by expertise level if appropriate
- A requirement for a minimum amount of chat room participation
- Guest speakers who are subject matter experts in the course topic to respond to the discussion topics and answer students' advanced questions
- Independent work groups using the chat room, with or without the instructor present
- Options to attend the class at multiple times during the week
- Establishment of baseline computer requirements for the course at the lowest level of technology necessary (computer speed, modem, Internet connection)

Future of the chat room as a virtual classroom

Almost all of the interviewees saw a future for the chat room and other Internet technologies. Most thought it should be a supplement to traditional classrooms in its current state. They envisioned a more virtual classroom using a system of mini-video cameras attached to students' and instructors' personal computers and voice rather than a text-based chat room. Some thought that distance learning was new and that the virtual classrooms would come full circle and most students would return to traditional classroom settings. Some believed that computer systems could be developed in the near future in order to synthesize student responses to correct the chaos and confusion in the current mode of text-based virtual classroom communications. One student predicted a customization of the chat room based on instructor and student need:

> You know one thing that we will probably see is we will get educators involved. And I think we are seeing that now. And educators will begin to speak up and say "Well, I would like to be able to do this, I do this in the classroom, can I do this in the chat room or over the Internet?" And then we will see a marriage of educators' views and the technology experts who can actually make it happen.

Discussion

One way to evaluate the effectiveness and success of using the chat room as a virtual classroom is to see how it applies to a current theory of adult learning principles. Using Knowles' model of Andragogy in Practice (Knowles, Holton, and Swanson, 1998) as a measurement tool, the chat room had mixed reviews from this study. In order to discover how applicable the chat room was to the adult learner we need to mirror the concepts explained by Knowles, Holton, and Swanson:

> ...Andragogy in Practice, graphically shows that andragogy is a core set of adult learning principles. The six principles of andragogy, 1) the learner's need to know, 2) self-concept of the learner, 3) prior experience of the learner, 4) readiness to learn, 5) orientation to learning, and 6) motivation to learn, are listed in the center of the model. ...there are a variety of other factors that affect adult learning in any particular situation and may cause adults to behave more or less closely to the core principles. These include individual learner differences, situational differences, and goals and purposes of learning, shown in the outer two rings of the model. Andragogy works best in practice when it is adapted to fit the uniqueness of the learners and the learning situation. We see this not as a weakness of the principles, but as a strength. That is, their strength is that these core principles apply to all adult learning situations, provided they are considered in concert with other factors that are present in the situation (p. 4).

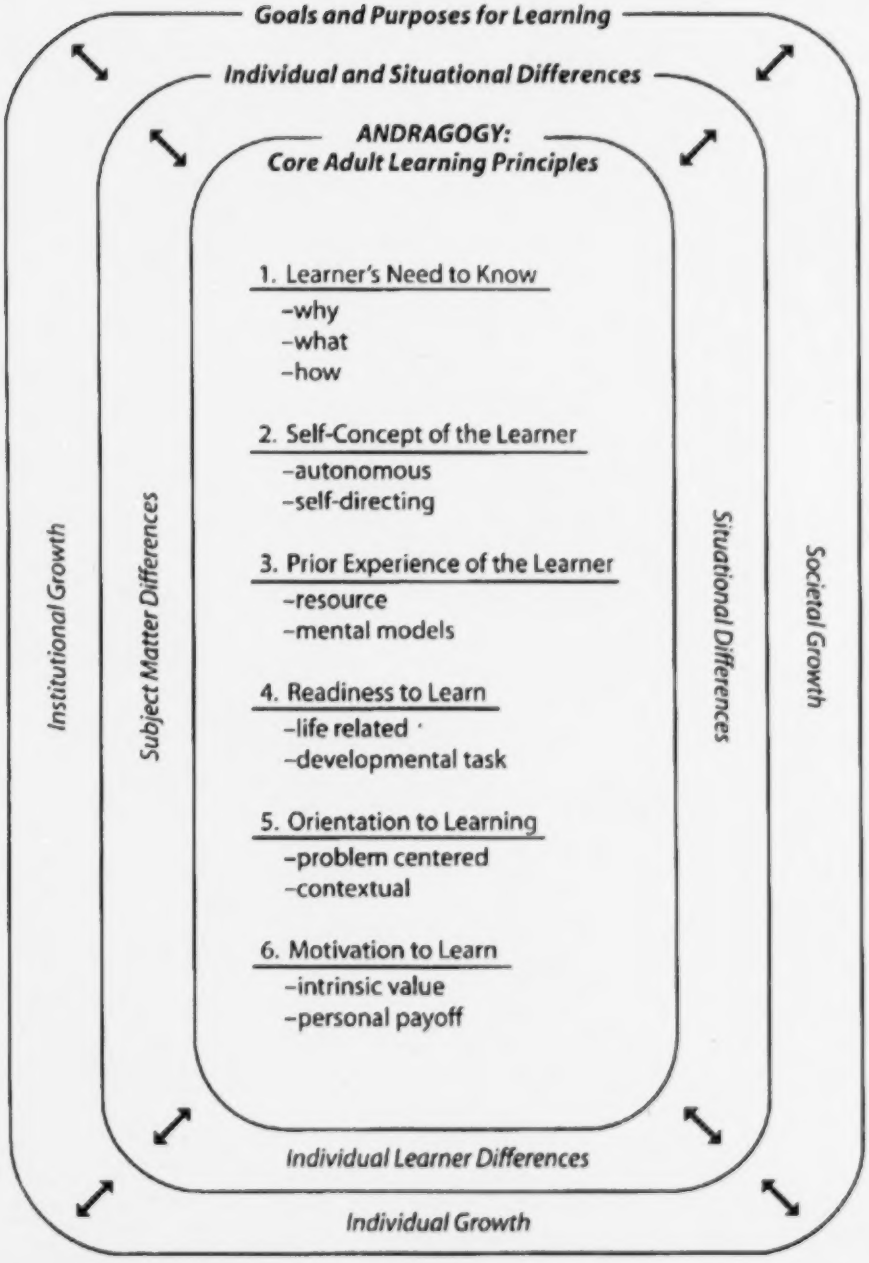

Figure 1-1. Andragogy in practice (Knowles, Holton, and Swanson, 1998).

The model of andragogy in practice is divided into core adult learning principles, individual and situational differences, and goals and purposes for learning. Comparing the chat room as a virtual classroom to each of these elements will provide a comprehensive evaluation as to whether or not the chat room is an applicable educational tool to use in adult learning programs of instruction. Starting at the core principle and working outward expands the comparison from the individual to a societal level.

Core

The chat room as a virtual classroom supports most of the core principles involved in Knowles' theory. As an educational tool to be used in the design of adult education programs, it supports the learner's need to know, the self-concept of the learner, readiness to learn, orientation to learning, and motivation to learn. Most of the interviewees, when asked at what level the chat room would be appropriate, replied at the individual adult level and some said only at the graduate level. They stated their responses were based on the maturity level of the student and that highly motivated, college bound high school students might also be successful in the chat room. This educational maturity level was described as self-motivated and highly motivated, self-disciplined and willing to work on their own (in their own environment) without supervision.

One of Knowles' Principles of Andragogy, prior experience of the learner, affected the adult learners in three ways when using the chat room as a virtual classroom. First, they were unable to fully express past experiences which might pertain to the subject at hand, because conversations in the chat room were in one or two lines of text, not in block paragraphs. The speed of the dialogue would not permit long descriptive narrations of personal histories or work experiences. Second, adults who were more experienced using the chat room were more

comfortable, positive and thought it had a better chance of success, a better future. Third, students with like experiences, those related to the topics being taught (education), dominated the chat room dialogue and therefore disadvantaged those adult students who were from other, unrelated fields.

Inner ring

The inner ring of the model of Andragogy in Practice, individual and situational differences, greatly influenced the adult learners' perception of the chat room as a virtual classroom. The adult learner's situational factors that favored the chat room included computer experience, time constraints, distance from educational institutions, and mitigating circumstances (such as single parents) which made participation in traditional education difficult. Although most students preferred the flexibility and convenience the chat room offered, some believed the lack of personal contact and the learning curve necessary to communicate in the chat room was a significant barrier to learning.

Individual learner differences were pronounced. The extremes went from oral and visual adult learners who felt the chat room was inadequate, to experienced chat room users who could communicate easily in a text-based environment and felt the entire course could be taught using chat and other Internet devices. Many felt that person-to-person contact was necessary and stated the chat room should only be a supplement to traditional classroom instruction.

Outer ring

The outer ring, goals and purposes for learning, consists of individual, societal and institutional growth. The individual growth experienced by students using the chat room was focused on learning more about technology, a new method of communication and a different educational tool. The society of learners would expand because using the chat room as a part of

distance learning programs would greatly expand the availability of this learning to individuals in the field. The inclusion of distance learning programs within colleges and universities will probably lead to growth of those educational institutions. An increasing number of universities are offering entire degree programs via total distance learning. When asked about distance learning degrees, some participants believed that obtaining a degree via the Internet was acceptable, however, they also stated lack of person-to-person contact with instructors and other students would lessen the educational experience and the quality of the degree.

Conclusion

The overall acceptance and approval of the chat room as a virtual classroom from the viewpoint of the interviewees was mixed, as can be seen by the information presented. Some believed they could never adapt, some overcame and adjusted to the new technology, and others readily accepted, embraced and promoted the concept. The majority thought that it was not a stand-alone or replacement instructional methodology but rather a supplement or addition to traditional classroom instruction. Many felt it should be an optional method of instruction but definitely not the only way to attain the educational goal for the adult learner. The logistical and convenience aspects of the chat room were most appealing to the interviewees while the lack of face-to-face contact and the text-based mode of communication were the most distracting.

Limitations

The major limitations of this study are population and scope. It covers only two classes and two instructors (with two different teaching styles) having the same field of study (education) as a foundation for the chat room. The newness of the technology is also a factor in the study. The technology of the chat room and subsequent alternatives to real-time interaction on the Internet are advancing at an exponential rate. Consequently, the findings of this study are

limited to a particular point in time when the technology and instructional techniques were relatively new.

Implications and Future Research

The results from this research indicate that the chat room as a virtual classroom has the potential to be a useful educational tool for some. Although this study indicated the chat room should not be the only method of learning, it may be considered as an alternative, supplement or addition to traditional forms of adult education programs. Studies of this kind should be periodically repeated to inform adult educational program designers and developers of new innovations and adult students' reactions to them. A broader and more thorough study of the chat room as a virtual classroom should be conducted to evaluate its potential for various fields of study and method of incorporation into current educational curricula for adults.

References

Hettinger, G. (1995). Raising the level of the debate: The effects of computer mediated communication on group dynamics and critical thinking skills. (ERIC ED 383 300) Proceedings of the 1995 Annual National Convention of the Association for Educational Communications and Technology (AECT), Anaheim, CA.

Knowles, M. S. (1980). The modern practice of adult education: From pedagogy to andragogy (2nd ed.) New York: Cambridge Books.

Knowles, M. S., Holton, E. F., and Swanson, R. A. (1998). The adult learner: the definitive classic in adult education and human resource development Houston: Gulf Publishing Company.

Merriam, S. (1998). Qualitative research and case study applications in education (2nd ed.) San Francisco: Josey-Bass Inc.

Merriam, S. B., & Caffarella, R. S. (1991). Learning in adulthood: A comprehensive guide San Francisco: Josey-Bass Inc.

Patton, Q. M. (1990) Qualitative evaluation methods (2nd ed.) Thousand Oaks, Calif.: Sage.

Powers, S. M. and Mitchell, J. (1997). Student perceptions and performance in a virtual classroom environment (ERIC ED 409 005) Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL.

Interview Concerning Chat Room Usage in Distance Learning Adult Education Programs

Please answer the following questions in an open and frank manner. Please remember participation is voluntary. You may stop participation at any time without penalty. You need not answer all questions. Your responses will be confidential and results will not be linked to individual respondents in reports of this research. The information will be used **only** to support a graduate level research study on the use of Internet tools in adult education programs. The information you provide will be kept in the strictest confidence and if any of your comments are included in the final report substitute names will be used to ensure anonymity. Thank you for your time and effort in participating in this endeavor. The following questions are provided as a guide to help you prepare for the interview:

1. What class did you take that used the chat room? (course number, course title, course description)
   A. When did you take the class?
   B. What were the course requirements?
   C. Did you have the option of not using the chat room?
2. How did you feel about using the chat room instead of the traditional classroom?
3. How was the chat room integrated into the overall course design? How did your class use the chat room?
   A. Did you use the chat room for the class any other than during "class room" sessions?
   B. How many times did your class have chat room sessions?
   C. Did you hold traditional classroom sessions as well?
   D. Was everyone involved in all the chat room sessions?
   E. Was the instructor the facilitator/coordinator at all sessions?
   F. Were there rules for using the chat room during the class?
   G. How well does the chat room substitute for the traditional classroom?

Appendix A

4. What was the interaction/relationship between chat room participants?
   A. Was the majority of discussion during chat room sessions between students or between the instructor and students?
   B. Was there a free flow of information among participants or was it somehow restricted? If it was restricted, how could the restriction have been eliminated?
   C. Were you or some of the other participants at a disadvantage when using the chat room? If so, why and how could the situation been remedied?
5. Which chat room did you use (Yahoo chat, AOL chat, etc.)?
   A. Did it have sidebar capabilities? Was the sidebar used?
   B. Did any of the class experience software or hardware problems?
   C. What were they and how were they solved?
   D. Were you comfortable using the mechanics of the chat room? Had you used a chat room frequently before attending this course? Do you use it frequently now?
6. What other Internet classroom devices were used (e-mail, bulletin board, etc.)?
7. At what level of education (high school, undergraduate, graduate) do you think it would be effective to use the chat room as a virtual classroom? Why?
8. How do you feel about college degrees obtained using only the Internet?
9. Are there some subjects you think wouldn't work using the chat room as a virtual classroom? Why?
10. How do you envision chat rooms being used in future distance learning adult education environments?

Appendix A